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EXAMINER	
WEST, JEFFREY R	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/852,102	ERYUREK ET AL.
	Examiner	Art Unit
	Jeffrey R. West	2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

This application is claiming the benefit of a prior filed nonprovisional application under 35 U.S.C. 120, 121, or 365(c). Copendency between the current application and the prior application is required. Applicant claims priority over application number 08/623,569, which was patented January 25, 2000.

The second application must be an application for a patent for an invention which is also disclosed in the first application (the parent or provisional application); the disclosure of the invention in the parent application and in the second application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ 2d 1077 (Fed. Cir. 1994). Applicant claims priority over Application number 09/257,896 and Application number 09/383,828. These listed applications do not disclose, *inter alia*, "a control system receiving the pressure data and providing the pressure data and real time clock readings associated with pressure data to a diagnostic application stored in the flow diagnostic system" or a network including "an application service provider (ASP), and the ASP provides the diagnostic application to the control system via the network". Therefore claims 1-27 do not receive the priority dates of these prior applications.

Application number 08/623,569 does not provide adequate support under 35 U.S.C. 112 because the application does not disclose, *inter alia*, a method for determining the condition of the impulse lines/piping, as presented in independent claims 1, 28, and 29. Therefore, claims 1-42 do not receive the priority date of this prior application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 28, 29, and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,680,109 to Lowe et al. in view of U.S. Patent No. 5,340,271 to Freeman et al. and U.S. Patent No. 5,710,370 to Shanahan et al.

Lowe discloses a system and method for the detection of blockages in the impulse lines of a differential pressure sensor, coupled to a fluid or gas to be measured by the impulse lines (column 1, lines 13-19), comprising at least one absolute pressure sensor coupled to at least one impulse line (column 2, lines 58-61) which transmits pressure data to an A/D converter to sample/digitize the pressure data (column 3, lines 45-47). Lowe then discloses a control system including a CPU and memory for storing the diagnostic program algorithms on a

computer readable medium (column 5, lines 45-57) that receives the real-time pressure data in a monitoring mode, represents the pressure data as statistical noise variance, and calculates a difference between a current sample set and an expected threshold (column 5, lines 17-21), to determine a sufficient change which indicates impulse line blockage (column 4, lines 29-43 and column 5, lines 21-26). Lowe discloses specifying that the pressure/diagnostic result indicates the blocked condition of the impulse lines based on the condition of a flow device, such as a pump or orifice plate (column 4, lines 35-43) for display to the user for diagnostic reporting (column 5, lines 59-62).

Lowe, however, discloses calculating a difference between current pressure data and an ideal threshold, rather than a difference between current pressure data and a moving average of pressure data. Lowe also fails to teach a method for calibrating the sensor with trained historical pressure data.

Freeman teaches a flow control method and means that detects variances above a predetermined variation limit to determine improper flow (column 2, lines 18-20) wherein the variance is determined by comparing the instantaneous data to a moving average of previously determined data that is then compared to a preset level (column 10, lines 56-66).

Shanahan teaches a method for calibrating a differential pressure fluid flow measuring system using one of a plurality of primary differential pressure flow sensors, including an averaging pitot tube, orifice plate, venturi tube, or flow nozzle (column 5, lines 35-47), wherein an initial linearization training process

characterizes/calibrates the device using historical/baseline data (column 6, lines 34-61) and subsequently measuring actual differential pressure data (column 7, lines 21-26). Shanahan then teaches comparing the historical/baseline calibration data to the average measured data, using statistical analysis, in order to determine incorrect out of calibration operation of the primary device and obtain a correction value for the operating values of the device (column 7, lines 27-47).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe to include calculating a difference between current pressure data and a moving average of pressure data, rather than a difference between current pressure data and an ideal threshold, as taught by Freeman, because both Lowe and Freeman teach methods for determining significant deviation but Freeman suggests a method that would provide more accurate results by providing a steady but continuously updated base level against which the magnitude of the instantaneous variations can be measured (column 10, lines 52-55).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe to include comparing current data to historical data to characterize/calibrate the primary element, as taught by Shanahan, because, as suggested by Shanahan, the combination would have determined accurate error, for elimination or indication, by using baseline data specific to the current system rather than desired values (column 2, lines 34-42 and column 5, lines 18-27).

Although the invention of Lowe, Freeman, and Shanahan doesn't specifically disclose calculating a standard deviation for the measurement signal, the

combination does provide using a variance to determine deviation of the measurement signal and therefore it would have been obvious to one having ordinary skill in the art to include determining the standard deviation because it is another well-known statistical method for determining deviation.

Further, with respect to claims 34 and 35, Applicant fails to provide the criticality for specifying that the primary element and impulse piping be "new". Further, it is considered inherent that the invention of Lowe, Freeman, and Shanahan would be applicable to both "new" and "old" components since the age of the component does not affect the diagnosing method.

4. Claims 1, 2, 7, 8, 11-15, 18, 19, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman and Shanahan and further in view of UK Patent No. 2 342 453 to Keech.

As noted above, Lowe in combination with Freeman and Shanahan teaches all of the features of the claimed invention except for including real-time clock readings associated with the pressure data.

Keech teaches a system and method of flowmeter logging for remote fault determination (page 1, lines 5-13) comprising measuring pressure data, using a pressure transducer (page 5, lines 13-14) at predefined intervals (page 3, lines 24-29) storing the data as a moving average (page 3, lines 1-4), and storing flow data with associated real-time clock readings provided by the control system (page 4,

lines 20-29 and page 9, lines 15-16) in a similar moving average method as that of the pressure data (page 7, line 22 to page 8, line 5).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, and Shanahan to include real-time clock readings associated with the pressure data, as taught by Keech, because, as suggested by Keech, the combination would have provided a method for monitoring measured data at regular intervals in order to enable changes in conditions to be spotted reliably without consuming excessive memory and therefore enabled improvement in the utility of the data (page 2, lines 17-30).

With respect to claim 7, although the invention of Keech doesn't specify that the pressure transmitter provide the clock readings, Applicant fails to provide the criticality of this feature and, since Keech provides a functionally equivalent method of time-stamping the pressure data when it is obtained, the claim is not considered patentable over the prior art.

5. Claims 3-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman, Shanahan, and Keech and further in view of U.S. Patent Application Publication No. 2002/0145568 to Winter.

As noted above, Lowe in combination with Freeman, Shanahan, and Keech teaches all of the features of the claimed invention except for including a remote computer and an Application Service Provider connected to the flow system over a network.

Winter teaches a meter register, for measuring flow information (0015), and transmitting a signal identifying the measured data (0014) wherein the measured information can be temporarily stored in a control computer local to the metering system (0061) before being transmitted to either a central computer, containing the monitoring program in order to analyze the information and provide it to a user (0056), or, in an alternative embodiment, provided to a user via a network (i.e. the Internet) using an Application Service Provider that stores the monitoring application (0056 and 0062).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include a remote computer and an Application Service Provider connected to the flow system over a network, as taught by Winter, because the invention of Lowe, Freeman, Shanahan, and Keech teaches remote monitoring and, as suggested by Winter, the combination would have provided a method for non-destructive remote monitoring in a manner that reduced labor-time and expenses (005-008).

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman, Shanahan, and Keech and further in view of U.S. Patent No. 4,926,364 to Brotherton.

As noted above, Lowe in combination with Freeman, Shanahan, and Keech teaches all the features of the claimed invention except for specifying that the moving average be a weighted moving average.

Brotherton teaches a method and apparatus for determining a weighted average of a process variable such as a flow rate or pressure sensor (column 1, lines 1-19) wherein the weighted average is given by the sum of the input values multiplied by a respective unique weighting factor (column 3, lines 3-20).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include specifying that the moving average be a weighted moving average, as taught by Brotherton, because, as suggested by Brotherton, the combination would have provided a continuous output while still taking into account inaccuracies caused by transients in the system being monitored (column 1, lines 37-54).

Although the invention of Brotherton doesn't provide the exact weighted average equation claimed in the instant invention, such weighted moving average equations are well-known in the art. (see DAU Stat Refresher, "What is a weighted moving Average?")

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman, Shanahan, and Keech and further in view of U.S. Patent No. 5,790,413 to Bartusiak et al.

As noted above, Lowe in combination with Freeman, Shanahan, and Keech teaches all of the features of the claimed invention except for specifying that the trained data set of historical data comprises a power spectral density of the difference.

Bartusiak teaches plant parameter detection by monitoring power spectral densities wherein the method comprises determining a reference power spectral density of a process variable during a time that the process variable is in a steady state and a current power spectral density of a process variable being currently monitored (column 4, lines 31-37). Bartusiak then teaches comparing the current power spectral density to the reference power spectral density to determine differences and therefore determine abnormalities (column 5, lines 26-31).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include specifying that the trained data set of historical data comprises a power spectral density of the difference, as taught by Bartusiak, because, as suggested by Bartusiak, the combination would have provided a method for determining an incipient condition in order to predict a future problematic condition (column 1, lines 16-25) and therefore eliminated costly failures.

With respect to claim 17, although the invention of Bartusiak doesn't specify that the power spectral density data be in the range of 0 to 100 Hertz, since Applicant fails to provide the criticality of this feature (page 15, lines 14-15) the limitation is considered to be an engineering design choice and therefore does not make the claim patentable over the prior art.

8. Claims 20, 21, and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lowe in view of Freeman, Shanahan, and Keech and further in view of U.S. Patent No. 5,495,769 to Broden et al.

As noted above, Lowe in combination with Freeman, Shanahan, and Keech teaches all the features of the claimed invention except for specifying that the system include an instrument manifold coupled between the pressure transmitter and the primary element or clamping the pressure transmitter at an integral orifice between pipe flanges.

Broden teaches a multivariable transmitter including the conventional configuration of coupling a differential pressure transmitter on either side of an orifice in a pipe (column 1, lines 20-23) with corresponding pipe flanges as well as a standard three or five valve manifold (column 2, line 55 to column 3, line 1 and Figure 1).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include specifying that the system include an instrument manifold coupled between the pressure transmitter and the primary element or claiming the pressure transmitter at an integral orifice between pipe flanges, as taught by Broden, because Broden suggests the common configuration for sensing processes variables using a differential pressure sensor (column 1, lines 20-26) as would be applicable in the invention of Lowe, Freeman, Shanahan, and Keech.

9. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lowe in view of Freeman, Shanahan, and Keech and further in view of JP Patent No. 08-114638 to Nagashima.

As noted above, Lowe in combination with Freeman, Shanahan, and Keech teaches all of the features of the claimed invention except for including a signal pre-processor and signal evaluator in the first algorithm.

Nagashima teaches a method for diagnosing abnormalities in machinery comprising obtaining a signal from the machinery, passing the signal to a pre-processor and wavelet transformation section, and finally executing statistical evaluation or pattern recognition to determine preliminary machinery abnormality (abstract).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include a signal pre-processor and signal evaluator, as taught by Nagashima, because, as suggested by Nagashima, the combination would have provided unsteady and transitional analysis in order improve the diagnostic performance of abnormality detection (0006).

Further, although not specifically disclosed, it would have been obvious to one having ordinary skill in the art to execute the pre-processing in the first algorithm since pre-processing needed before the system performs subsequent computations.

10. Claims 30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman and Shanahan and further in view of U.S. Patent No. 6,119,529 to Di Marco et al.

As noted above, Lowe in combination with Freeman and Shanahan teaches all the features of the claimed invention except for using fuzzy logic in combination with a neural network to perform the flow comparison.

Di Marco teaches a fluid flow meter and corresponding flow measuring methods, such as those including a pitot tube to measure the velocity of a fluid flow by taking pressure measurements at two points of a conduit (column 1, lines 41-44) comprising a flow measurement device connected to a fuzzy logic processor (column 7, lines 64-67) and an initially trained neural network for processing the fuzzy logic commands to compare two flow measurements (column 11, lines 5-11 and 16-34).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, and Shanahan to include using fuzzy logic in combination with a neural network to perform the flow comparison, as taught by Di Marco, because, as suggested by Di Marco, the combination would have provided a method for obtaining desired results inexpensively and regardless of restricting limitations (column 6, lines 28-33 and 56-62 and column 10, lines 43-46).

11. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman, Shanahan, and Keech and further in view of U.S. Patent No. 5,828,567 to Eryurek et al.

As noted above, Lowe in combination with Freeman, Shanahan, and Keeech teaches all the features of the claimed invention except for using the diagnostic data to determine the estimated life or impending failure of the system.

Eryurek teaches a diagnostics for a resistance based transmitter including a resistance based sensor for sensing a process variable and providing a sensor output which is sent to diagnosing circuitry that calculates and outputs a residual life estimate of the sensor (column 1, lines 47-65) wherein the residual life estimate represents an impending sensor failure (column 7, lines 24-33).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, Shanahan, and Keech to include using the diagnostic data to determine the estimated life or impending failure of the system, as taught by Eryurek, because, as suggested by Eryurek, the combination would have provided a method for determining precisely when a replacement of a senor is needed and therefore avoided unexpected failures (column 1, lines 39-43).

12. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe in view of Freeman and Shanahan and further in view of U.S. Patent No. 5,828,567 to Eryurek et al.

As noted above, Lowe in combination with Freeman and Shanahan teaches all the features of the claimed invention except for using the diagnostic data to determine the estimated life or impending failure of the system.

Eryurek teaches a diagnostics for a resistance based transmitter including a resistance based sensor for sensing a process variable and providing a sensor output which is sent to diagnosing circuitry that calculates and outputs a residual life estimate of the sensor (column 1, lines 47-65) wherein the residual life estimate represents an impending sensor failure (column 7, lines 24-33).

It would have been obvious to one having ordinary skill in the art to modify the invention of Lowe, Freeman, and Shanahan to include using the diagnostic data to determine the estimated life or impending failure of the system, as taught by Eryurek, because, as suggested by Eryurek, the combination would have provided a method for determining precisely when a replacement of a senor is needed and therefore avoided unexpected failures (column 1, lines 39-43).

Response to Arguments

13. Applicant's arguments filed July 28, 2003, have been fully considered but they are not persuasive.

Applicant first requests the withdrawal of the objections to the priority claims "[s]ince applicant presently argues over the art cited, there does not appear to be any need to consider priority issues at the present stage of prosecution." The Examiner asserts that since Applicant's arguments regarding the claim rejections are not persuasive, the issues of priority are pertinent to examination.

Applicant then argues that "[n]either Lowe et al. nor Freeman et al. nor Shanahan et al. teach or suggest basing a flow diagnostic output or report on a <u>moving</u>

<u>average</u>." Applicant then supplies a definition for the term moving average that requires "consecutive members of a sequence where the series is symmetrical about and includes the member whose moving average is being calculated".

The Examiner first asserts that the invention of Freeman teaches a flow control method and means that detects variances above a predetermined variation limit to determine improper flow (column 2, lines 18-20) wherein the variance is determined by comparing the instantaneous data to a rolling (i.e. moving) average of previously determined data that is then compared to a preset level (column 10, lines 56-66). The invention of Freeman specifically includes a "rolling average" and one having ordinary skill in the art would recognize the functional equivalency between the "rolling average" and a "moving average". See, for example, the cited art of "Statistics Glossary: Time series data," which defines a "moving average" as "a form of average which has been adjusted to allow for seasonal or cyclical components of a time series" and "moving average smoothing" as "a smoothing technique used to make the long term trends of a time series clearer," and "The Indicators Story," which defines a "rolling average" as a "statistical technique for smoothing out data trends that are subject to aberrant fluctuations in the short term."

Secondly, while Applicant includes a specific definition of a "moving average" in the Response, the Examiner interprets a "moving average" to have a definition consistent with that of the art of the invention, such as the definition provided by DAU Stat Refresher, "What is a weighted moving average?" This reference suggests a definition in accordance with the "rolling average" disclosed by Freeman

that does not include the "symmetric" provisions in the definition supplied by Applicant.

Thirdly, the definition provided in Applicant's arguments is not defined in the specification. It has been held that where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that Applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). Since the definition provided in the arguments is not included in the specification, one having ordinary skill in the art would interpret the "moving average" with definitions common in the art.

Finally, the definition provided in Applicant's arguments is not consistent with the definition disclosed in the specification. On page 13, lines 25-28, Applicant provides the equation $A_j = \sum_{k=0}^{m} (P_{j+k})(W_k)$ for calculating the moving average where A is the moving average, P is a series of sequentially sensed pressure values, W is a numerical weight for a sensed pressure value, and m is a number of previous sensed pressure values in the series. This equation calculates a moving average as a summation of weighted pressure values, a definition consistent with the rolling average of Freeman and the weighted moving average of DAU Stat Refresher, "What is a weighted moving average?" This equation does not replace a member of

a sequence of observations by averages of series of consecutive members of the sequence with the series being symmetrical about, and including, the member whose moving average is being calculated. Therefore, Applicant's arguments filed in the Response are not supported by the specification.

For these reasons, Applicant's arguments regarding the definition of a "moving average" are not persuasive and the combination of Lowe, Freeman, and Shanahan meets the invention as claimed.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DAU Stat Refresher, "What is a weighted moving average?" teaches the definition of a weighted moving average.

"Statistics Glossary: Time series data" teaches the definition of a moving average.

"The Indicators Story" teaches the definition of a "rolling average".

Clemins et al., "Detecting Regimes in Temperature Time Series" calculates a "moving average" and plots the moving average as a "rolling average".

Goncz, "Re: Digital Filter-Moving Average" defines a moving average and a rolling average equivalently.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
October 14, 2003

Marc S. Hoff

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800